**Small Business Innovation Research/Small Business Tech Transfer**

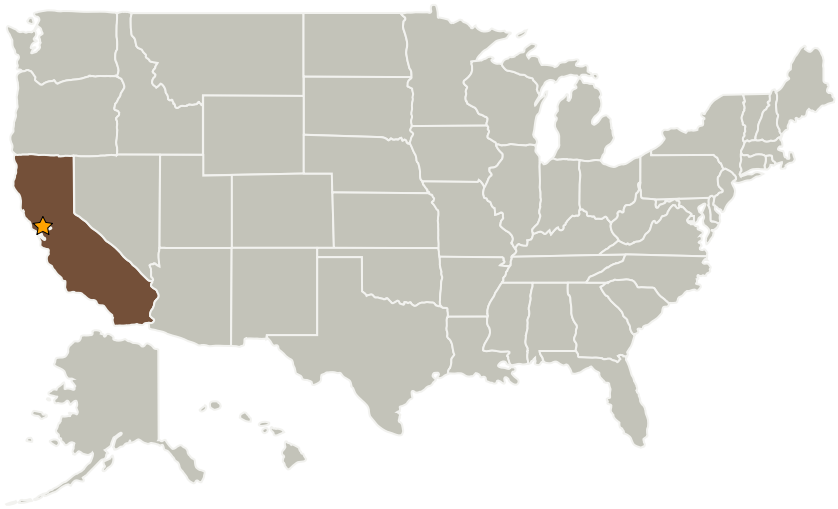
# Compact, Ultrasensitive Formaldehyde Monitor, Phase I

Completed Technology Project (2008 - 2008)

## Project Introduction

This Small Business Innovative Research Phase I proposal seeks to develop an ultrasensitive, laser-based formaldehyde gas sensor system for airborne and ground-based atmospheric monitoring. The proposed instrument will be capable of accurately determining sub-parts-per-billion formaldehyde concentrations in seconds. This compact, lightweight instrument will be capable of long-term autonomous operation, and require minimal power. The Phase I research will demonstrate the feasibility of the technology by performing measurements on formaldehyde samples using a bench-scale laboratory instrument that employs a novel, frequency agile laser source. The results of these tests will be used to quantify detection limits for a Phase II instrument. Commercial systems based on the Phase II prototype will be developed and marketed during Phase III.

## Primary U.S. Work Locations and Key Partners



| Organizations Performing Work | Role | Type | Location |
|---|---|---|---|
| ★Ames Research Center(ARC) | Lead Organization | NASA Center | Moffett Field, California |
| Novawave Technologies | Supporting Organization | Industry | Redwood City, California |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## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Center / Facility:**

Ames Research Center (ARC)

**Responsible Program:**

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| Primary U.S. Work Locations |
| --- |
| California |

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

**Principal Investigator:**

Joshua Paul

## Technology Areas

**Primary:**

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.5 Radiation
    - TX06.5.5 Monitoring Technology